Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Students Cheat Less When Education Matters? Connecting Academic Relevance, Motivation, and Ethical Decision-Making.

Maciej Koscielniak

mkoscielniak@swps.edu.pl

SWPS University https://orcid.org/0000-0003-3452-864X

Agata Gasiorowska

SWPS University https://orcid.org/0000-0002-3354-1095

Short Report

Keywords: academic dishonesty, academic relevance, mastery motivation, dishonesty interventions

Posted Date: November 25th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-3845579/v2

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Additional Declarations: The authors declare no competing interests.

Students Cheat Less When Education Matters? Connecting Academic Relevance, Motivation, and Ethical Decision-Making.

Maciej Koscielniak[1,2], Agata Gasiorowska[1]

[1]Department of Psychology, SWPS University

[2]Interdisciplinary Center for Applied Cognitive Studies, SWPS University

Author Note

The data collection for this study was financed exclusively by the authors, utilizing personal funds. The findings have not been disseminated in any peer-reviewed scientific journals or submitted for publication elsewhere. The authors declare no conflicts of interest related to this study.

Correspondence regarding this article should be directed to Maciej Koscielniak, Department of Psychology at SWPS University, ul. Kutrzeby 10, 61-719 Poznan, Poland. Email: mkoscielniak@swps.edu.pl.

Abstract

Academic misconduct is a serious issue across educational systems worldwide, preventing accurate assessment and encouraging harmful habits. The current study focuses on academic relevance as an essential but mostly overlooked factor in promoting academic integrity, utilizing a dual model of individual vs. collective forms of academic dishonesty. It was hypothesized that students' belief in the practical application of their learning and its relevance to future careers would positively correlate with increased mastery motivation, decreasing the likelihood of engaging in dishonest behavior. The research sample included 235 students from various Polish universities, ranging in age from 18 to 51, providing a diverse demographic range. The study confirmed that academic relevance negatively predicts academic dishonesty through path analysis and mediation modeling. Mastery orientation was a significant mediator for the impact of academic relevance on individual dishonesty intentions, while performance motivation mediated the relationship for both individual and collective dishonesty. The findings are discussed with an emphasis on their practical implications, particularly in the context of developing effective interventions to reduce academic dishonesty in educational settings.

Keywords: academic dishonesty, academic relevance, mastery motivation, dishonesty interventions

Students Cheat Less When Education Matters? Connecting Academic Relevance, Motivation, and Ethical Decision-Making.

Extensive research underscores the diversity in motivations propelling students toward higher education, as summarized in the comprehensive review by Krou et al. (2021). When analyzed at the level of individual differences, constructs such as values, self-efficacy, and control beliefs emerge as pivotal (Pintrich et al., 1993). However, central to this discourse is the concept of academic goals, which encompasses a student's aspirations within their educational journey. This construct is well elaborated upon in theoretical frameworks such as the theory of motivational mindsets (Hudig et al., 2020), self-determination theory (Reeve, 2012), and achievement goal theory (AGT; Elliot, 1999; Elliot & McGregor, 2001). A unifying element in these theories in the higher education context is the emphasis on the perceived relevance of academic pursuits to one's future professional and social roles.

The notion of *academic relevance*, though established in the scholarly literature for several decades (Trow, 1971; Williams, 1970), still lacks a comprehensive understanding of its practical implications, particularly in how it influences students' actual behavior. This study is a preliminary investigation of the relationship between a sense of academic relevance and inclination toward academic dishonesty—as one of the most significant issues in contemporary academic settings. The focus of this study is to explore this relationship within the theoretical confines of achievement goal theory, explicitly examining the role of goal motivation in mediating the link between academic relevance and students' propensity toward academic dishonesty.

Problem of Academic Dishonesty

The research on academic dishonesty has grown increasingly urgent in recent years. Stephens (2019) aptly describes academic dishonesty as "Natural and Normal but Unethical and Evitable," emphasizing its widespread yet preventable nature. He further categorizes it as

an "epidemic", a term highlighting its pervasive and contagious characteristics, referring to Gino et al. (2009). This issue has persisted over time despite the introduction of new technologies that enable the detection of plagiarism and fraud. Recent studies on academic dishonesty (e.g. Bacon et al., 2020) show statistics similar to or even worse than those of Bowers' research (1964), where 75% of students were involved in various forms of cheating.

The consequences of academic dishonesty extend far beyond the classroom, affecting various agents in the educational ecosystem. For students, engaging in dishonest behaviors undermines the learning process and skill development that education is designed to foster (Gallant, 2008). For institutions, widespread cheating threatens the validity of assessments and the credibility of credentials (McCabe, 2012). From a societal perspective, the normalization of academic dishonesty may contribute to ethical erosion in professional settings, as noted by Lawson (2004), who found correlations between academic dishonesty and workplace misconduct.

Furthermore, the COVID-19 pandemic exacerbated this challenge, as noted by Elsalem et al. (2021), with the shift to remote learning creating new opportunities for dishonest behaviors. Lancaster and Cotarlan (2021) documented significant increases in the use of contract cheating services during pandemic lockdowns, while Eaton (2020) described the new conditions created by emergency remote teaching that facilitated various forms of academic misconduct. This trend underscores the urgent need for continued research into academic dishonesty, focused on understanding its root causes and developing effective interventions.

In this paper, we expand upon the two-factor model of examination dishonesty proposed by Koscielniak et al. (2024), which distinguishes between individual and collective forms of examination misconduct. We extend this framework beyond examination settings to investigate general academic dishonesty, focusing on how students' perceptions of academic

relevance may influence their susceptibility to engage in either individual or social forms of academic misconduct. Importantly, we examine how this relationship is mediated by achievement goal orientations—specifically mastery and performance goal orientations (Anderman & Koenka, 2017; Elliot & McGregor, 2001).

Academic relevance

Academic relevance, rooted in students' experiences with classroom material, refers to their belief that their schoolwork holds genuine significance for their future aspirations (Andriessen et al., 2006; Cosijn & Ingwersen, 2000). This perception of relevance is multifaceted, encompassing both the applicability of knowledge, its direct utility in practical contexts, and its usefulness, which ties acquired skills to broader societal issues or personal goals (Pisarik & Whelchel, 2018). Within the framework of achievement goal theory (AGT), relevance plays a critical role in shaping students' motivational orientations and subsequent engagement with learning tasks (Elliot, 1999; Elliot & McGregor, 2001). AGT posits that students adopt specific goals—such as mastery goals (focused on understanding and competence) or performance goals (centered on demonstrating ability)—and the perceived relevance of academic content heavily influences which goals they prioritize. When students see their coursework as meaningful to their future, they are more likely to pursue mastery goals, driving deeper learning and self-improvement, rather than merely aiming to outperform peers or meet external benchmarks.

The linkage between relevance and motivation is further explained by AGT's emphasis on how goal structures affect students' effort and persistence. For instance, Elliot and Murayama (2008) argue that when academic tasks align with students' personal aspirations—such as career ambitions—they foster a mastery-approach orientation, where the focus is on developing competence for its own sake. This orientation enhances intrinsic motivation, as students engage with material not just to achieve a grade but to build skills they

view as essential to their long-term success. Supporting this, Simons et al. (2004) found that students who perceived their learning as relevant to future goals employed more adaptive behavioral strategies, such as self-regulation and critical thinking, compared to those who saw little connection between their studies and their lives. This suggests that relevance acts as a catalyst, shifting students from superficial compliance to active, goal-directed participation.

Moreover, the impact of relevance extends to student engagement, a key outcome in educational settings. Crumpton and Gregory (2011) observed that when students viewed coursework as pertinent to their future, they exhibited higher levels of involvement, including increased attentiveness and willingness to tackle challenging problems. This aligns with AGT's premise that mastery goals, spurred by relevance, lead to greater task absorption and resilience (Elliot & McGregor, 2001). In contrast, when relevance is absent, students may default to performance-avoidance goals—aiming merely to avoid failure—which can diminish engagement and stunt intellectual growth (Newstead et al., 1996). For example, a student who sees no career value in a mathematics course might focus solely on passing rather than mastering the concepts, missing out on deeper learning opportunities.

The broader implications of academic relevance also warrant consideration, particularly in areas like academic integrity, where its role remains underexplored despite extensive literature reviews on dishonesty (Andriessen et al., 2006). If students perceive their work as disconnected from meaningful outcomes, they may be more prone to disengage or resort to shortcuts, undermining their achievement goals. Conversely, when relevance is emphasized, it could reinforce a mastery orientation that discourages such behavior, as students become invested in authentic skill development (Elliot, 1999). This study sought to investigate this potentially significant relationship, using AGT as a lens to examine how relevance shapes students' goals, engagement, and learning strategies. By highlighting these

connections, educators can better design curricula that anchor academic content in students' future aspirations, fostering a more motivated and ethically grounded student body.

Achievement goals

Achievement goal theory (AGT) has emerged as one of the most influential frameworks for understanding student motivation and academic behavior in educational settings (Elliot & Hulleman, 2017). Developed through the pioneering work of researchers like Dweck (1986), Nicholls (1984), and later refined by Elliot (1999), AGT provides a comprehensive explanation for how students' goals in achievement contexts shape their cognition, affect, and behavior. This theory initially distinguished between two primary goal orientations: *mastery goals* (MGs), which focus on developing competence, improving one's knowledge and skills, and task mastery; and *performance goals* (PGs), which emphasize demonstrating competence relative to others, outperforming peers, and gaining favorable judgments (Elliot, 1999; Pintrich, 2000).

AGT has evolved over time to include further distinctions within these orientations. Elliot and McGregor (2001) proposed a 2×2 framework that distinguishes between approach and avoidance tendencies within both mastery and performance goals. Mastery-approach goals involve striving to learn and improve, while mastery-avoidance goals focus on avoiding misunderstanding or failure to learn. Similarly, performance-approach goals involve seeking to outperform others, while performance-avoidance goals concentrate on avoiding appearing incompetent compared to others (Elliot & Murayama, 2008). This nuanced framework has enabled researchers to better understand the complex relationships between goal orientations and academic outcomes.

In the context of academic dishonesty, a substantial body of research indicates that mastery motivation is negatively associated with students' dishonesty intentions, whereas performance goals—particularly performance-approach goals—have a more positive or

negligible relationship with dishonesty intentions (Anderman, 2007; Anderman & Midgley, 2004; Krou et al., 2021; van Yperen et al., 2011). A meta-analysis by Krou et al. (2021) involving 79 studies confirmed that mastery goals consistently predict lower levels of cheating, while performance-approach goals show positive associations with academic dishonesty. This pattern has been replicated across various cultural contexts, including Polish samples pertinent to our research (Baran & Jonason, 2020; Dziurzyńska et al., 2016).

The relationship between achievement goals and academic dishonesty can be explained through several mechanisms. Mastery-oriented students, who value knowledge acquisition and self-improvement, typically find intrinsic satisfaction in the learning process itself. For these students, cheating undermines their core objective of developing genuine competence (Murdock & Anderman, 2006). In contrast, performance-oriented students, particularly those with approach tendencies, prioritize demonstrating superior ability and obtaining favorable outcomes regardless of the means. When faced with challenging academic situations, these students may view dishonest behavior as an instrumental strategy to achieve their goal of outperforming others (Anderman & Koenka, 2017).

Hypotheses

Following the literature, our study proposes that (H1) students' belief in the practical, academic relevance of their education is negatively associated with their intention to engage in both individual (H1a) and collective (H1b) academic dishonesty. Second (H2), we anticipate that the relationship between academic relevance and academic dishonesty will be mediated by the level of academic motivation, particularly mastery and performance orientation. However, we propose that the indirect effects via academic motivation would differ depending on the type of academic dishonesty, such that (H2a) mastery motivation would be a specific mechanism explaining the relationship between academic relevance and intention to engage in individual dishonest behaviors. In contrast, (H2b) performance

motivation would explain the relationship between academic relevance and intention to engage in collective dishonest behaviors. As a robustness check, we will also test the abovementioned hypotheses when controlled for demographic factors (age, gender) and academic achievement (GPA).

Method

Participants

We initially recruited 256 participants via a national research company, with the requirement of being a current student. We used an attention-control item, excluding 21 participants who appeared not to have read the questions thoroughly. The final sample comprised 235 students from various Polish universities (143 women and 92 men). The participants' ages ranged from 18 to 51 years, with a mean age of 26.43 years (SD = 7.92). Post-hoc power analysis using Monte Carlo simulations revealed that such a sample size had a power of .8 to detect an effect of $\beta = .18$ in regression analysis and an indirect effect of $ab = .10$ in mediation analysis at $\alpha = .05$.

Procedure

Participation in the study was voluntary and conducted without financial incentives. After providing informed consent, participants were asked to provide information on their gender, age, and approximate grade point average (GPA) from the previous semester. Then, they were asked to identify their academic course and to answer an open-ended question about the specific occupation they aimed to pursue in the future. Subsequently, they rated their perception of how relevant their current academic course is to their anticipated career. This assessment was made using a single-slider scale ranging from 0 (indicating "*It has no relevance to my planned career*") to 100 (signifying "*It holds complete relevance, offering the fundamental knowledge and skills needed for my career path*"). This variable served as a measure of academic relevance assessment (M = 69.54, SD = 24.05).

Then, participants were asked to read seven behavioral scenarios measuring their readiness for individual and collective academic dishonesty. Scenarios for individual dishonesty included using cheat sheets during an important exam, paying someone to write a thesis, plagiarizing a passage, and fabricating a health condition to delay a deadline (M = 27.18, SD = 21.63, α = .74). Scenarios for collective dishonesty included taking an exam for another student, allowing a friend to copy from one's exam sheet, and providing colleagues with the content of the questions memorized during the exam (M = 45.36, SD = 21.20, α = .56). While the reliability coefficient for collective subscale is below the conventional threshold, we retained this measure as it captures conceptually distinct unethical behaviors related to helping others (moreover, the lower alpha value is statistically expected given the known sensitivity of Cronbach's alpha to item count (Cortina, 1993)). For each scenario, participants rated their likelihood of engaging in these behaviors on a slider scale from 0% (no likelihood of engaging) to 100% (complete readiness to engage). The readiness to engage in individual and collective dishonest behaviors served as a dependent variable.

Finally, participants were asked to complete the revised version of the Achievement Goal Questionnaire (AGQ-R; Elliot & Murayama, 2008) in Polish translation by Baran and Jonason (2020). This scale consists of 12 items measuring four dimensions of achievement motivation: mastery approach, mastery avoidance, performance approach, and performance avoidance, with answers ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). In this study, we used aggregated scores for mastery orientation (M = 3.90, SD = 0.58, α = .78) and performance orientation (M = 3.38, SD = 0.90, α = .91). Higher scores indicate greater endorsement of each dimension.

Results

Before examining the mediation model, we conducted preliminary analyses to assess the associations between our key variables. Table 1 presents the partial correlations between academic dishonesty measures and the primary predictors, controlling for each variable's relationship with other measures. This approach provides a clearer picture of the unique relationships between variables by accounting for potential shared variance. The correlation analysis serves as a foundation for understanding the underlying patterns before proceeding to more complex structural modeling.

Table 1

Partial correlations of two types of academic dishonesty.

	Individual Dishonesty		Collective Dishonesty	
	r	*p*	*r*	*p*
Academic relevance	-.27	<.001	.02	.786
Mastery orientation	-.28	<.001	-.03	.628
Performance orientation	.15	.019	-.25	<.001
Age	-.28	<.001	.11	.086
Academic Year	.01	.910	-.02	.781
GPA	-.27	<.001	.07	.278

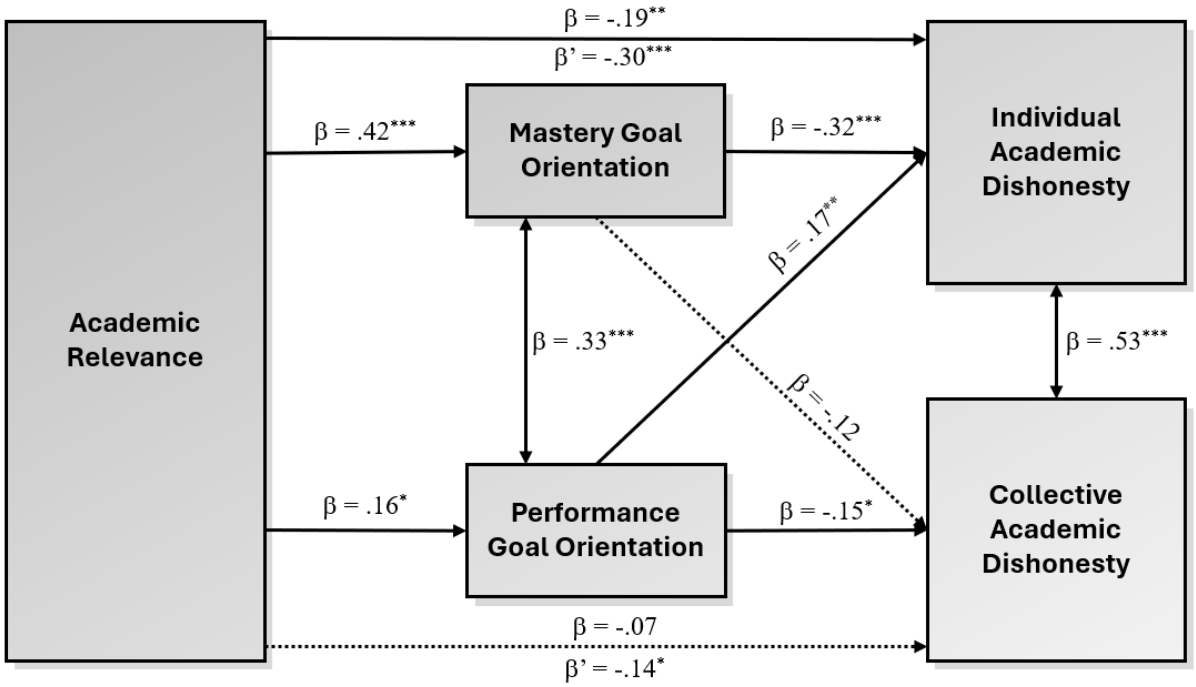
As shown in Table 1, the pattern of correlations provides initial support for our hypotheses. Academic relevance and mastery orientation both demonstrate significant negative correlations with individual dishonesty, while performance orientation correlates positively with this form of academic misconduct.

For collective dishonesty, the pattern differs notably. Neither academic relevance nor mastery orientation shows significant correlations with collective dishonest behaviors. However, performance orientation demonstrates a significant negative relationship with collective dishonesty, contrary to its relationship with individual dishonesty. These differential patterns reinforce the importance of distinguishing between types of academic dishonesty when examining their psychological correlates.

To further understand these relationships and test our hypotheses regarding the mediating role of achievement goals, we proceeded to path analysis. We conducted a path analysis using belief in academic relevance as an independent variable, mastery and achievement orientation as mediators (correlated), and willingness to engage in individual and collective dishonest academic behavior as dependent variables (correlated). We estimated the model using the maximum likelihood estimation method in MPlus 8.10 (Asparouhov & Muthén, 2021) and tested total, direct and indirect effects using bias-corrected bootstrap with 10,000 samples (see Figure 1).

Figure 1

Structural Equation Model of relationships between academic relevance, goal orientation and academic dishonesty.



The model was saturated with a a perfect fit (RMSEA = 0, CFI = 1, TLI = 1). As shown in Table 2 (Model 1), the total effect of academic relevance on the likelihood of

engaging in academic dishonesty was significant and negative for both individual and collective aspects of dishonesty. Academic relevance was positively associated with mastery and performance orientation, with the former effect being stronger than the latter. Mastery orientation was negatively related to individual academic dishonesty, but not to collective academic dishonesty. Performance orientation, on the other hand, was negatively associated with collective dishonesty. We also found a significant and positive relationship between performance orientation and individual dishonesty.

Most importantly, we found significant indirect effects of academic relevance via goal orientation for both individual and collective academic dishonesty. However, in line with our research hypotheses, these effects differed depending on the type of dishonesty. Specifically, we found a negative indirect effect via mastery orientation and a positive indirect effect via performance orientation on individual dishonesty. When controlling for these two mediators, the direct effect of academic relevance on individual dishonesty remained significant. In contrast, we found a negative indirect effect via performance orientation on collective dishonesty, but no effect of mastery orientation. When controlling for both mediators, the direct effect of academic relevance on collective dishonesty was not significant.

The second model (Model 2 in Table 1) included participants' gender, age, and GPA as covariates of the mediators and the dependent variables. We found a significant relationship between GPA and mastery orientation, but not performance orientation. We also found a significant negative relationship between GPA and individual — but not collective — academic dishonesty. We found a significant effect of gender on performance orientation, such that women scored higher on this variable than men. Women were also more likely than men to admit to individual dishonesty, but not collective dishonesty. The effects of age were not significant. Most importantly, after controlling for these three covariates, we still observed negative overall effects of academic relevance on two types of academic dishonesty,

accompanied by two negative indirect effects: via mastery orientation on individual dishonesty and via performance orientation on collective dishonesty.

Discussion

This study investigated the relationships between academic relevance, achievement motivation, and academic dishonesty among university students in Poland. Through mediation analyses, we examined how students' perceptions of academic relevance to their future careers influence their propensity toward academic dishonesty, with a particular focus on the mediating role of achievement goal orientations. Our results confirmed that academic relevance negatively predicts academic dishonesty, with mastery and performance motivations serving as significant mediators in this relationship.

The observed negative association between academic relevance and academic dishonesty aligns with achievement goal theory (Elliot & McGregor, 2001), suggesting that when students perceive their coursework as pertinent to their future careers, they are less likely to engage in dishonest behaviors. This finding extends previous research by Anderman and Koenka (2017), who emphasized the importance of motivational factors in understanding academic dishonesty. Our study specifically highlights the distinctive pathways through which academic relevance influences different types of academic misconduct. For individual dishonesty, mastery orientation served as a significant mediator, consistent with Krou et al.'s (2021) meta-analytic finding that mastery goals consistently predict lower levels of cheating. This suggests that students who value knowledge acquisition for its own sake find cheating counterproductive to their learning goals, as noted by Murdock and Anderman (2006).

Interestingly, our results revealed different psychological underpinnings of individual and collective academic dishonesty. This distinction is particularly evident in the case of performance motivation, which positively predicts the tendency toward individual dishonesty (where dishonesty serves as a means to secure good grades) but negatively predicts collective

dishonesty (as helping others contradicts the essence of achievement motivation, which is often oriented toward competing with others to reach one's goals). The differential effects of motivation types on individual versus collective dishonesty extend the two-factor model proposed by Koscielniak et al. (2024), suggesting that these forms of misconduct are driven by different psychological mechanisms. This finding adds nuance to our understanding of academic dishonesty, highlighting that interventions may need to be tailored differently depending on whether they target individual or collaborative forms of misconduct.

Several limitations should be considered when interpreting these findings. First, the reliance on self-reported measures of academic dishonesty may have introduced social desirability bias, potentially leading to underreporting of dishonest behaviors. Second, the cross-sectional design precludes causal inferences about the relationships between variables (longitudinal research would provide more robust evidence of how changes in academic relevance influence motivation and dishonesty over time). Third, while our sample included students from various Polish universities, the generalizability of findings to other countries remains uncertain. Finally, the relatively low reliability of the collective dishonesty measure suggests that this construct may benefit from further refinement in future studies.

Despite these limitations, this study makes a significant contribution to the literature on academic integrity by identifying academic relevance as a crucial factor in reducing dishonest behavior. Unlike many existing interventions that focus on detection and punishment, our findings suggest a more proactive approach centered on enhancing the perceived relevance of academic content to students' professional aspirations. By demonstrating how academic relevance operates through motivational pathways to influence academic integrity, this research offers practical implications for educators and institutions seeking to foster a culture of academic honesty. Future research building on these findings could develop and test interventions specifically designed to enhance academic relevance,

potentially providing a novel and effective strategy in the ongoing effort to promote ethical academic conduct.

References

Anderman, E. M. (2007). The Effects of Personal, Classroom, and School Goal Structures on Academic Cheating. In E. M. Anderman & T. B. Murdock (Eds.), *Psychology of Academic Cheating* (pp. 87–106). Academic Press. https://doi.org/10.1016/B978-012372541-7/50008-5

Anderman, E. M., & Koenka, A. C. (2017). The Relation Between Academic Motivation and Cheating. *Theory Into Practice*, *56*(2), 95–102. https://doi.org/10.1080/00405841.2017.1308172

Anderman, E. M., & Midgley, C. (2004). Changes in Self-Reported Academic Cheating Across the Transition from Middle School to High School. *Contemporary Educational Psychology*, *29*(4), 499–517. https://doi.org/10.1016/j.cedpsych.2004.02.002

Asparouhov, T., & Muthén, B. (2021). Advances in Bayesian Model Fit Evaluation for Structural Equation Models. *Structural Equation Modeling: A Multidisciplinary Journal*, *28*(1), 1–14. https://doi.org/10.1080/10705511.2020.1764360

Bacon, A. M., McDaid, C., Williams, N., & Corr, P. J. (2020). What motivates academic dishonesty in students? A reinforcement sensitivity theory explanation. *British Journal of Educational Psychology*, *90*(1), 152–166. https://doi.org/10.1111/bjep.12269

Baran, L., & Jonason, P. (2020). Academic dishonesty among university students: The roles of the psychopathy, motivation, and self-efficacy. In *Plos one*. journals.plos.org. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0238141

Bowers, W. (1964). *Student Dishonesty and Its Control in College.* Columbia University, Bureau of Applied Social Research.

Chiang, F.-K., Zhu, D., & Yu, W. (n.d.). A systematic review of academic dishonesty in online learning environments. *Journal of Computer Assisted Learning*, *n/a*(n/a). https://doi.org/10.1111/jcal.12656

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, *78*(1), 98–104. https://doi.org/10.1037/0021-9010.78.1.98

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*(10), 1040–1048. https://doi.org/10.1037/0003-066X.41.10.1040

Dziurzyńska, E., Englert-Bator, A., & Wołpiuk-Ochocińska, A. (2016). The motivation of achievements among high school and university students with different levels of academic dishonesty. *Prace Naukowe Akademii Im. Jana Długosza w Częstochowie. Pedagogika*, *25*(1), 59–71. https://doi.org/10.16926/p.2016.25.04

Eaton, S. E. (2020). Academic Integrity During COVID-19: Reflections From the University of Calgary. *International Studies in Educational Administration*, *48*(1), 80–85.

Elliot, A. J. (1999). Approach and Avoidance Motivation and Achievement Goals. *Educational Psychologist*, *34*(3), 169–189. https://doi.org/10.1207/s15326985ep3403_3

Elliot, A. J., & Hulleman, C. S. (2017). Achievement goals. In A. J. Elliot, C. Dweck, & D. S. Yeager (Eds.), *Handbook of competence and motivation: Theory and application* (2nd ed., pp. 46–60).

Elliot, A. J., & McGregor, H. A. (2001). A 2× 2 achievement goal framework. *Journal of Personality and Social Psychology*, *80*(3), 501.

Elliot, A. J., & Murayama, K. (2008). On the measurement of achievement goals: Critique, illustration, and application. *Journal of Educational Psychology*, *100*(3), 613–628. https://doi.org/10.1037/0022-0663.100.3.613

Elsalem, L., Al-Azzam, N., Jum'ah, A. A., & Obeidat, N. (2021). Remote E-exams during Covid-19 pandemic: A cross-sectional study of students' preferences and academic

dishonesty in faculties of medical sciences. *Annals of Medicine and Surgery*, *62*, 326–333. https://doi.org/10.1016/j.amsu.2021.01.054

Gallant, T. B. (2008). Academic Integrity in the Twenty-First Century: A Teaching and Learning Imperative. *ASHE Higher Education Report*, *33*(5), 1–143.

Gino, F., Ayal, S., & Ariely, D. (2009). Contagion and differentiation in unethical behavior: The effect of one bad apple on the barrel. *Psychological Science*, *20*(3), 393–398. https://doi.org/10.1111/j.1467-9280.2009.02306.x

Hudig, J., Scheepers, A. W. A., Schippers, M. C., & Smeets, G. (2020). Motivational Mindsets and Reasons for Studying: Development and Validation of a Classification Tool. *Frontiers in Psychology*, *11*. https://www.frontiersin.org/articles/10.3389/fpsyg.2020.535801

Koscielniak, M., Enko, J., & Gąsiorowska, A. (2024). "I Cheat" or "We Cheat?" The Structure and Psychological Correlates of Individual vs. Collective Examination Dishonesty. *Journal of Academic Ethics*, *22*(1), 71–87. https://doi.org/10.1007/s10805-024-09514-x

Krou, M. R., Fong, C. J., & Hoff, M. A. (2021). Achievement Motivation and Academic Dishonesty: A Meta-Analytic Investigation. *Educational Psychology Review*, *33*(2), 427–458. https://doi.org/10.1007/s10648-020-09557-7

Lancaster, T., & Cotarlan, C. (2021). Contract cheating by STEM students through a file sharing website: A Covid-19 pandemic perspective. *International Journal for Educational Integrity*, *17*(1), 3. https://doi.org/10.1007/s40979-021-00070-0

Lawson, R. A. (2004). Is Classroom Cheating Related to Business Students' Propensity to Cheat in the "Real World"? *Journal of Business Ethics*, *49*(2), 189–199. https://doi.org/10.1023/B:BUSI.0000015784.34148.cb

McCabe, D. L. (2012). Cheating in college: Why students do it and what educators can do about it. In *Cheating in College: Why Students do it and what Educators Can do About it* (pp. 1–225).

Murdock, T., & Anderman, E. (2006). Motivational perspectives on student cheating: Toward an integrated model of academic dishonesty. *Educational Psychologist*. https://doi.org/10.1207/s15326985ep4103_1

Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, *91*(3), 328–346. https://doi.org/10.1037/0033-295X.91.3.328

Pintrich, P. R. (2000). An Achievement Goal Theory Perspective on Issues in Motivation Terminology, Theory, and Research. *Contemporary Educational Psychology*, *25*(1), 92–104. https://doi.org/10.1006/ceps.1999.1017

Pintrich, P. R., Marx, R. W., & Boyle, R. A. (1993). Beyond Cold Conceptual Change: The Role of Motivational Beliefs and Classroom Contextual Factors in the Process of Conceptual Change. *Review of Educational Research*, *63*(2), 167–199. https://doi.org/10.3102/00346543063002167

Reeve, J. (2012). A Self-determination Theory Perspective on Student Engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of Research on Student Engagement* (pp. 149–172). Springer US. https://doi.org/10.1007/978-1-4614-2018-7_7

Stephens, J. M. (2019). Natural and Normal, but Unethical and Evitable: The Epidemic of Academic Dishonesty and How We End It. *Change: The Magazine of Higher Learning*, *51*(4), 8–17. https://doi.org/10.1080/00091383.2019.1618140

Trow, M. A. (1971). *Preliminary Findings from National Surveys of American Higher Education*. Carnegie Commission on the Future of Higher Education. https://files.eric.ed.gov/fulltext/ED048823.pdf

van Yperen, N. W., Hamstra, M. R. W., & van der Klauw, M. (2011). To Win, or Not to Lose, At Any Cost. *British Journal of Management*, *22*, S5–S15. https://doi.org/10.1111/j.1467-8551.2010.00702.x

Williams, R. I. (1970). Black Pride, Academic Relevance & Individual Achievement. *The Counseling Psychologist*, *2*(1), 18–22. https://doi.org/10.1177/001100007000200106

Table 1

	Model 1						Model 2					
	β	SE	Z	p	95% boot CI		β	SE	Z	p	95% boot CI	
Structural paths												
AR → mastery orientation	.42	.07	5.92	.001	.28	.55	.37	.07	5.61	.001	.24	.50
GPA → mastery orientation							.20	.05	3.74	.001	.10	.31
Gender → mastery orientation							.10	.05	1.92	.054	.00	.21
Age→ mastery orientation							-.04	.06	-.68	.498	-.15	.07
AR → performance orientation	.16	.07	2.43	.015	.03	.30	.17	.07	2.54	.011	.04	.30
GPA → performance orientation							.09	.07	1.32	.186	-.04	.22
Gender → performance orientation							-.21	.07	-3.00	.003	-.34	-.07
Age→ performance orientation							.06	.07	.99	.324	-.07	.19
Mastery orientation → individual AD	-.32	.07	-4.70	.001	-.44	-.18	-.22	.07	-3.07	.002	-.37	-.08
Performance orientation → individual AD	.17	.06	2.95	.003	.06	.28	.11	.07	1.66	.098	-.02	.24
AR → individual AD	-.19	.07	-2.98	.003	-.32	-.07	-.18	.06	-2.82	.005	-.31	-.05
GPA → individual AD							-.13	.06	-1.98	.048	-.26	.00
Gender → individual AD							-.18	.06	-2.82	.005	-.30	-.05
Age → individual AD							.08	.06	1.33	.183	-.04	.21
Mastery orientation → collective AD	-.12	.08	-1.59	.111	-.27	.03	-.09	.08	-1.13	.257	-.26	.07
Performance orientation → collective AD	-.15	.07	-2.22	.026	-.27	-.02	-.17	.07	-2.41	.016	-.30	-.03
AR → collective AD	-.07	.06	-1.11	.268	-.19	.05	-.06	.07	-.96	.338	-.19	.07
GPA → collective AD							-.02	.07	-.22	.828	-.15	.12
Gender → collective AD							-.06	.08	-.75	.451	-.20	.10
Age → collective AD							.05	.07	.78	.436	-.08	.19
Covariances												

Mastery orientation ←→ performance orientation	.33	.07	4.56	.001	.19	.47	.37	.07	5.51	.001	.23	.50
Individual AD ←→ collective AD	.53	.05	11.26	.001	.43	.62	.53	.05	11.28	.001	.43	.62
Mediation												
Total effect AR → individual AD	-.30	.06	-4.67	.001	-.42	-.17	-.25	.07	-3.81	.001	-.37	-.12
Total effect AR → collective AD	-.14	.06	-2.29	.020	-.27	-.02	-.13	.07	-1.91	.060	-.25	.003
Total indirect effect AR→ individual AD	-.10	.03	-3.08		-.18	-.05	-.07	.03	-2.17		-.14	-.02
AR → mastery orientation → individual AD	-.13	.04	-3.69		-.22	-.07	-.08	.03	-2.62		-.16	-.03
AR → performance orientation → individual AD	.03	.02	1.77		.01	.07	.02	.01	1.27		-.001	.06
Total indirect effect AR → collective AD	-.07	.03	-2.17		-.15	-.01	-.06	.03	-1.90		-.14	-.01
AR → mastery orientation → collective AD	-.05	.03	-1.50		-.13	.01	-.04	.03	-1.07		-.11	.02
AR → performance orientation → collective AD	-.02	.02	-1.49		-.07	-.001	-.03	.02	-1.63		-.08	-.01

Figures

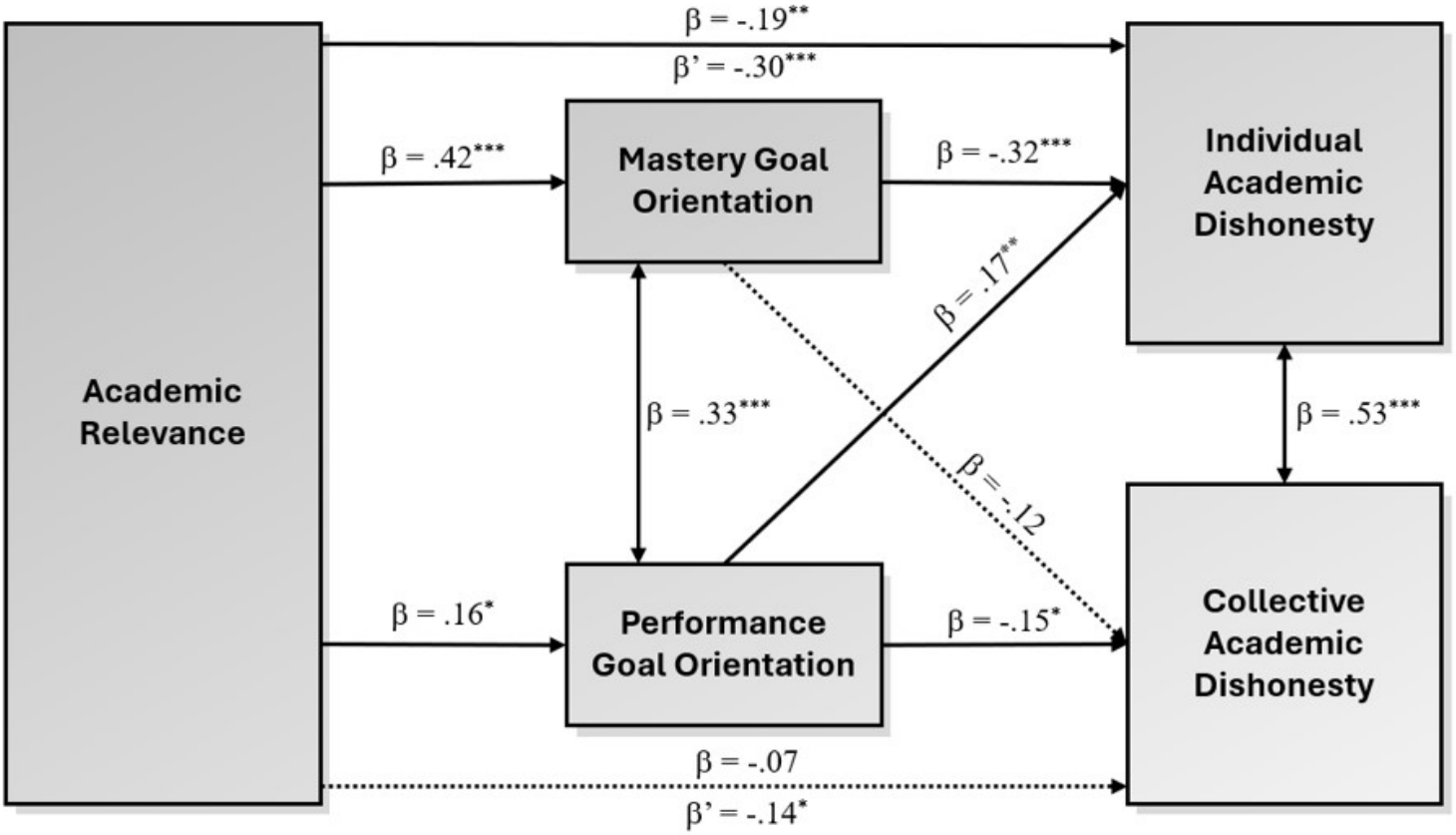


Figure 1

Structural Equation Model of relationships between academic relevance, goal orientation and academic dishonesty.